S-PLANE

Reliable | Proven | Certification-ready

Applications

Manned & Unmanned ISR Aircraft, OPS, UAS and AAM

S-PLANE offers proven certification-ready Aircraft Automation, Communication, Simulation and Ground Control Solutions as part of our X-KIT. These mature solutions enable the development of: Cargo and ISR UAS/OPS from manned and unmanned aircraft; manned ISR aircraft; and fly-by-wire and automation solutions for Advanced Air Mobility (AAM) aircraft.

Our expertise spans a wide range of aircraft configurations, including fixed-wing, rotary-wing and multi-rotor aircraft ranging from 100 kg to over tens of tons GMTOW, designed for both civil and military missions. Integration can be performed for new aircraft or as modernisation and upgrade projects for existing fleets.

S-PLANE provides modular, proven hardware and software that integrates with existing systems, adapts to your project and reduces hardware requirements and integration risk, while supporting your engineering team from integration through certification to help get your aircraft to market faster.

Applications

Manned & Unmanned ISR Aircraft, OPS, UAS and AAM

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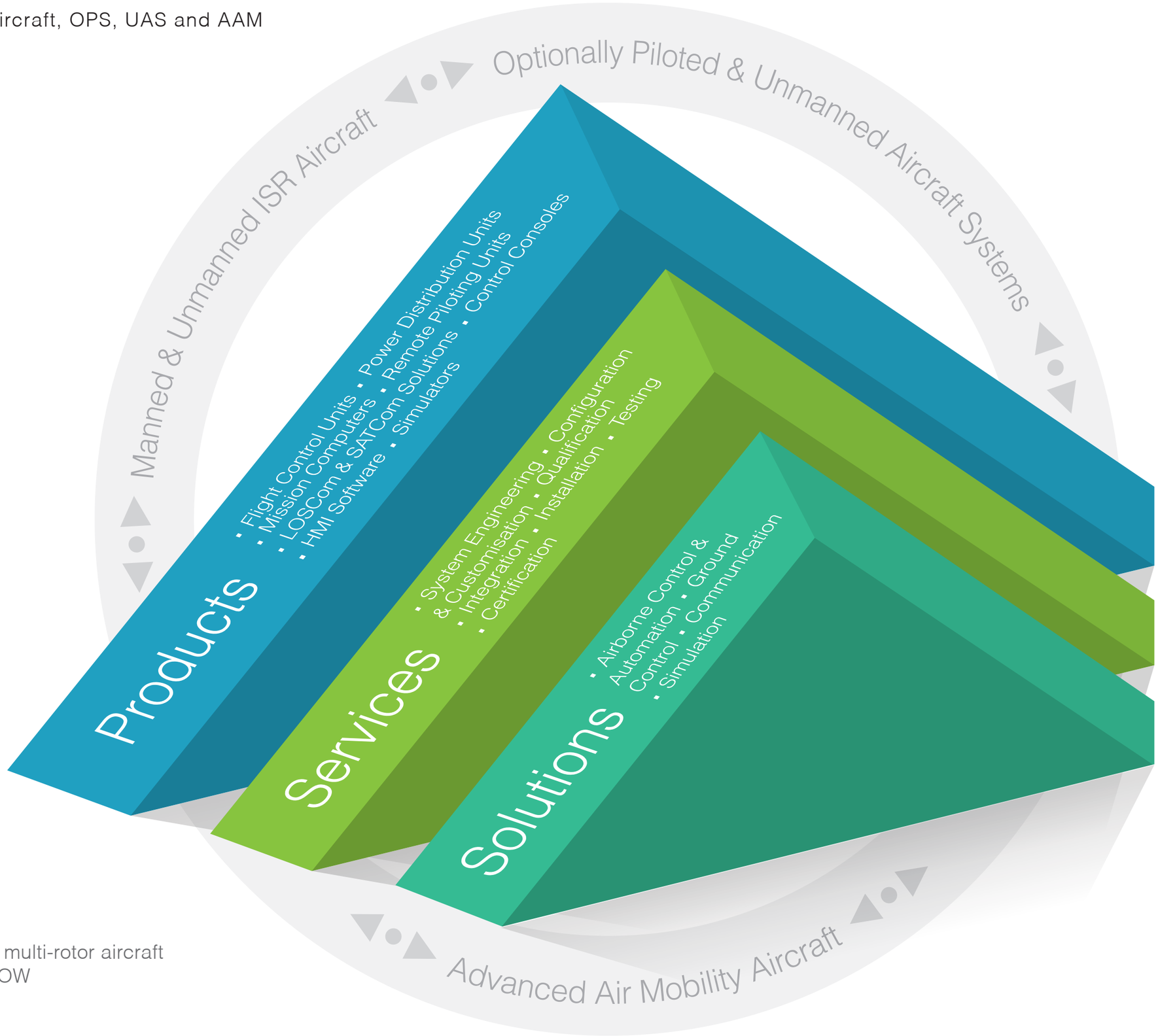
- Standards-based
- Redundant
- Flight-critical Design
- Fully Customisable
- Open Architecture



- Fixed-wing, rotary-wing and multi-rotor aircraft
- 100 kg to over 20 tons GMTOW
- MALE and HALE Aircraft

Applications

Manned & Unmanned ISR Aircraft, OPS, UAS and AAM

Airborne Control And Automation Solutions

Comprehensive Airborne Control and Automation Solutions transform manned and unmanned aircraft into remote and on-board fly-by-wire and fully automated Unmanned and Optionally Piloted Aircraft Systems. These solutions support Advanced Air Mobility and specialised manned and unmanned mission platforms, including ISR aircraft. The core building blocks of these solutions are S-PLANE's X-CUBE and NX-FCU Flight Control Units (FCUs), and S-PLANE's X-ADT ISR mission computer. These are supported by systems engineering, integration, flight testing and certification support.

Ground Control Solutions

Robust and flexible Ground Control Station (GCS) solutions which support manned, unmanned, and optionally piloted aircraft systems. These solutions are tailored for a variety of configurations, including fixed, containerised, vehicle-mounted and man-portable GCS, to Aircraft Control Stations (ACS) installed to manned aircraft. We deliver optimised and comprehensive mission and payload situational awareness to both aircrew and remote operators via S-PLANE's Paragon appliances and operator stations.

Communication Solutions

Reliable, high-performance RF connectivity for both manned and unmanned aircraft, in Line of Sight (LOS) and Beyond Visual Line of Sight (BVLOS) conditions. At the core of these solutions is the TRACKER+, S-PLANE's integrated antenna tracking system which is supported by industry-leading third-party satellite and LOS communication links.

Simulation Solutions

High-performance and comprehensive system-wide Simulation Solutions to support system and subsystem development, integration, production, training, and maintenance. Typical functions include acceptance, verification and validation, qualification, and integration testing. Our Simulation Solutions include Software- and Hardware-In-the-Loop Simulation (SILS & HILS). SILS is used for development and is also integral to S-PLANE's Ground Control Stations (GCS). HILS is an essential modern tool for system and sub-system development and for integration and testing of aircraft and their sub-systems.

X-KIT Key Equipment

X-CUBE

- The X-CUBE is the core avionics unit of the X-KIT for UAS/OPS conversion
- Function: Flight Control Unit (FCU), Power Distribution Unit (PDU) and Input/Output (I/O) Concentrator
- Support SCP, DFR and TFR internal redundancy with dedicated voting
- Further supports dual X-CUBE external redundancy with failover architecture

X-ADT

- Airborne Data Terminal (ADT)
- Function: Mission Computer, I/O Concentrator, HD-SDI Video Encoder, Data Storage, Ethernet Switch
- Supports S-PLANE's mission software and third-party or custom containerised software
- Interfaces with and manages and controls mission payloads (RADAR, EO/IR, SIGINT, AIS and Direction Finder)

X-RPU

- Remote Piloting Unit (RPU)
- Function: Safety-critical Command & Control Computer, and I/O Concentrator
- Interfaces to Primary Flight Controls (PFC), GCC MFD, Hard I/O (buttons and switches with parallel redundancy) and to data links/tracker

TRACKER+

- Stand-alone GNSS-based antenna tracker for UHF, L-, S- and C-bands
- Function: Long-range Line of Sight Communication (LOSCom) between aircraft and Ground Control Stations (GCS)
- Mesh network enabled

GCC and Paragon

- Ground Control Console (GCC)
- Configured as a Remote Piloting Station, Payload Operating Station, or Engineering Station
- Function: HMI for Paragon, PFD with HUD, and MFD (touch display) for Remote Piloting

Equipment Chains & Products

	AIRBORNE CONTROL	GROUND CONTROL	COMMUNICATION	SIMULATION
NX-FCU	Automation & ISR Mission		Automation & ISR Mission	
X-CUBE	Automation		Automation	
X-ADT	ISR Mission		ISR Mission	
X-RPU		Automation		
GCC		Automation & ISR Mission		
Paragon	Automation & ISR Mission			
X-GDT		ISR Mission	Automation & ISR Mission	
TRACKER+			Automation & ISR Mission	
XSIM-HILS				Automation & ISR Mission
XSIM-Workbench				Automation & ISR Mission
XSIM-Video				Automation & ISR Mission

Contact Details: 9B Cyclonite Road, The Interchange, Somerset West, South Africa, 7130 • Phone: +27 21 851 9282, Fax: +27 86 298 4587, Email: info@s-plane.com

Information provided on this brochure is subject to change without notice.